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MINIMUM REQUIRED PERFORMANCE LIMITS FOR DETECTION OF *PROHIBITED SUBSTANCES*

In order to ensure that all *Doping Control* Laboratories can report the presence of *Prohibited Substances*, their *Metabolite(s)* or their *Marker(s)* in a uniform way, a minimum routine detection capability for testing methods has been established. It is recognized that some Laboratories will be able to identify a wider range or lower concentrations of *Prohibited Substances* than other Laboratories. While such individual capabilities are encouraged in order to improve the overall system, it is also recognized that there are Minimum Required Performance Limit (MRPL) at which all Laboratories must be able to operate.

The MRPL is not a threshold, nor is it a limit of detection or a limit of quantification. *Adverse Analytical Findings* may result from concentrations below those listed in the table.

The following table lists general requirements for detection of concentrations of representative substances in the classes of *Prohibited Substances* and, where applicable, specific exceptions.

Minimum Required Performance Limits

Prohibited Class	Specific Examples/ Exceptions	Concentration
Stimulants[a]		0.5 µg/mL
	Strychnine	0.2 µg/mL
Narcotics		0.2 µg/mL
	Buprenorphine	10 ng/mL
Anabolic Agents[a]		10 ng/mL
	Clenbuterol	2 ng/mL
	Methandienone[b]	2 ng/mL
	Methyltestosterone[c]	2 ng/mL
	Norandrosterone	1 ng/mL
	Stanozolol[d]	2 ng/mL
	Epitestosterone	2 ng/mL
β-blockers		0.5 µg/mL
Diuretics[e]		0.25 µg/mL
Glucocorticosteroids		30 ng/mL
Peptide Hormones		
	hCG	5 mIU/mL

[a] For the parent compound or the main metabolite.
[b] 17β-methyl-5β-androst-1-ene-3α,17α-diol.
[c] 17α-methyl-5β-androstane-3α,17β-diol.
[d] 3'-hydroxystanozolol.
[e] for thiazides: metabolites and degradation compounds.

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For the Non-Threshold Substances, the Laboratory should document at least annually (or whenever major repairs are made on instrumentation) that they can identify representative substances from the class of compounds. Where substance-specific MRPLs are given, the Laboratory should conduct tests on those compounds.

Laboratories must be able to routinely detect substances at or above the concentrations given in the above table.

It is presumed that these concentrations and drug types will be changed periodically due to factors such as changes in detection technology and patterns of drug abuse.

Test methods must also reliably establish the presence of Threshold Substances at concentrations greater than the threshold. The thresholds are listed in the table below.

Compound	**Threshold**
Carboxy-THC [a]	>15 ng/mL
Cathine	> 5 µg/mL
Ephedrine	> 10 µg/mL
Epitestosterone [b]	> 200 ng/mL
Methylephedrine	> 10 µg/mL
Morphine [c,d]	> 1 µg/mL
19-norandrosterone (males & females) [e]	> 2 ng/mL
Salbutamol [c,f]	> 1 µg/mL
T/E ratio [g]	

[a] A urinary concentration of 11-nor-delta 9-tetrahydrocannabinol-9-carboxylic acid (carboxy-THC) greater than 15 ng/mL constitutes a doping violation and must be reported.

[b] Corrected for specific gravity of 1.020.

[c] The threshold concentration is based on the sum of the glucuronide conjugate and free drug concentrations.

[d] Morphine at a urinary concentration greater than 1 µg/mL constitutes a doping violation unless it may have been caused as a result of the administration of a permitted substance such as codeine. Laboratories should consider the presence of other substances that would provide evidence of the administration of codeine and related substances.

[e] Threshold corrected if specific gravity above 1.020.

[f] Salbutamol concentrations in urine greater than 1 µg/mL are defined as a doping violation. Concentrations greater than 100 ng/mL should be reported as an adverse finding relative to use of a β2 agonist.

[g] Refer to section S4-1b of the Prohibited List.